

Patent claims

1. A printer (101) with an elongate media output port (30),  
in particular for a digital tachograph for a motor vehicle,  
5 with at least one bearing surface (15) which delimits the media  
output port (30) in a transverse direction and along which the  
printing medium (91) slides during output, characterized in  
that the media output port (30) has an elongate sealing closure  
(2) which is movable in the transverse direction and which  
10 presses elastically against the bearing surface (15) by means  
of a sealing feed guide (14), so as to close the media output  
port (30), the printing medium (91) being capable of being  
outputted between the bearing surface (15) and the sealing  
closure (2) in an output direction (12).  
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2. The printer (101) as claimed in claim 1, characterized in  
that the sealing closure (2) is designed as an elastic seal  
with an elastic sealing lip (10) which presses elastically  
against the bearing surface (15).  
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3. The printer (101) as claimed in claim 2, characterized in  
that the seal has an at least partially sickle-shaped  
cross-sectional profile, the convex side (11) of the cross-  
sectional profile pointing opposite to the output direction  
25 (12) of the printing medium.
4. The printer (101) as claimed in claim 2, characterized in  
that the seal is designed as a hollow profile, and a  
cavity-surrounding wall has a circular form or an elliptic form  
30 or an oval form.
5. The printer (101) as claimed in claim 3, characterized in  
that the seal is provided, in the region of the ends delimiting  
the longitudinal extent, in each case with a transverse end web  
35 (5) in the concave hollow surface (13).

6. The printer (101) as claimed in claim 5, characterized in that the plane described by the transverse end web (5) is arranged obliquely to the transverse direction, so that said web forms an angle of between  $30^{\circ}$  and  $85^{\circ}$ , in particular  $60^{\circ}$ , with a longitudinal axis (16) of the seal which runs in the longitudinal direction.

7. The printer (101) as claimed in claim 6, characterized in that the distance between the transverse end webs (5) located opposite one another at the two ends increases toward the sealing feed guide (14).

8. The printer (101) as claimed in claim 2, characterized in that a further transverse web (4) is arranged in the concave hollow surface (13), on both sides, between the middle with respect to the longitudinal direction and the respective transverse end web (5), said further transverse web having an identical oblique position and, in particular, running parallel to the transverse end web (5).

9. The printer (101) as claimed in claim 2, characterized in that at least the transverse end webs (5) have, in the region of their extent in the transverse direction, a complete and leaktight tie-up to the concave hollow surface (13).

10. The printer (101) as claimed in claim 2, characterized in that the seal consists of two components (1, 3) which have a different hardness, the softer component (3) being arranged in the region of the sealing feed guide (14), and the harder component (1) being arranged essentially in a region of fastening of the seal.

11. The printer (101) as claimed in claim 2, characterized in that the seal is fastened to a boundary of the paper output port in the region located opposite the bearing surface (15).

5 12. The printer (101) as claimed in claim 11, characterized in that the seal is guided by means of centering projections (21), and the seal is provided with recesses (6) in a fastening region (52) located opposite the sealing feed guide (14) in the transverse direction, the centering projections (21) being  
10 arranged in the recesses (6).

13. The printer (101) as claimed in claims 10 and 12, characterized in that the recesses (6) have, for the centering projections (21), fitting surfaces (9) which are formed by a  
15 layer of the softer component (1) on the harder component (3).

14. The printer (101) as claimed in claim 12, characterized in that a fastening component (32) clamps the seal in the fastening region (52).  
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15. The printer (101) as claimed in claim 1, characterized in that the sealing closure (2) is designed as a resilient sealing closure, with a leaf spring portion (51) which is designed as a leaf spring (55) and which has adjoining it a closing portion  
25 (50) having an essentially rigid bearing edge which bears against the bearing surface (15) by means of a sealing feed guide (14), the leaf spring portion (51) prestressing the closing portion (50) elastically against the bearing surface (15).  
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16. The printer (101) as claimed in claim 15, characterized in that the bearing surface (15) is provided with a soft covering (56).

17. The printer (101) as claimed in claim 16, characterized in that the soft covering (56) consists of felt (57).

18. The printer (101) as claimed in claim 15, characterized in that the seal has, in a continuation opposite to the output direction (12), a sliding surface which adjoins the bearing edge and which forms an acute angle with the bearing surface (15) at the sealing feed guide (14).

19. The printer (101) as claimed in claim 15, characterized in that the seal is designed to be longer in the longitudinal direction than the output port.

20. A printing method for a printer (101) as claimed in claim 1 or 15, characterized in that a control unit (93) controls the media feed out of a media stock (92) and is designed in such a way that, in a first step (a) of a printing operation, printing medium (91) from the media stock (92) is transported in the output direction (12) on the far side of the sealing closure (2), in a second step (b) printed printing medium (91) is separated from the media stock (92), and, in a third step (c), the remaining printing medium (91) connected to the media stock (92) is transported back opposite to the output direction (12) until there is no longer any printing medium (91) located between the bearing surface (15) and the sealing feed guide (14).

21. The printing method as claimed in claim 20, characterized in that the printer (101) has a sensor (97) which communicates to the control unit (93) whether printing medium (91) is located in the region of the sealing feed guide (14) at the bearing surface (15) or not.